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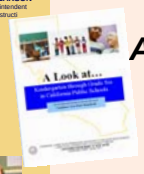


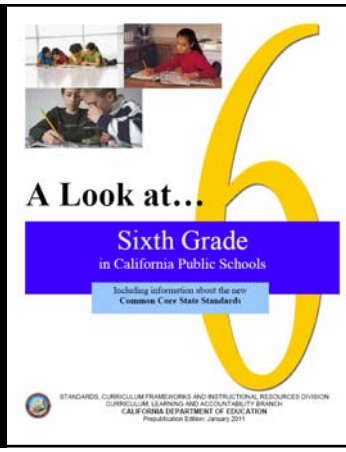
A Look at Kindergarten Through Grade Six in California Public Schools

A new publication focusing on California's content standards, including the Common Core State Standards

Webinar 8 of 8: Grade Six

Jim Long

Ken McDonald



Sixth-Grade Curriculum Contents

English Language Arts

Overview

Students in sixth grade focus on active engagement with text. They are required to analyze, identify, define, explain, integrate, evaluate, compare, contrast, and cite supportive evidence – developing and building upon those skills that were required in fifth grade. Deeper analysis of literature and informational text continues to be the focus of sixth-grade instruction, although reading fluently and accurately remains a goal for all students. Students' understanding of the precise meaning of words, English language conventions, structural features of informational text and materials, and

Standards-based instruction is a critical element to

What Sixth-Grade Students Should Know

In fifth grade, students read and analyzed a variety of historical and culturally significant works of literature and focused more attention on comprehension of complex and narrative texts. Students read grade-level text fluently and accurately and mastered foundational reading skills in preparation for sixth grade and beyond. (Fifth grade is the last grade in which the CCSS include specific standards in foundational reading skills.) Students analyzed how structure, point of view, visual elements, and figurative language contribute to the meaning or tone of text. They expanded their comprehension and analysis skills to compare, contrast, and integrate information from two or more texts; determined the theme or thesis; and used details and supporting evidence from the text to draw conclusions.

Students learned academic language and domain-specific vocabulary through their reading and used it in their writing and speaking. In writing, students learned to group related information logically; used words,

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What Students Learn in Sixth Grade

Students read and analyze a wide range of literature from different times and cultures, with an increasing emphasis on analyzing informational text on grade-level topics in all sixth-grade subject areas. The emphasis in sixth grade is on students' comprehension of complex narrative and informational texts. Students read two or more texts on a topic and use a variety of comprehension strategies to compare, contrast, and integrate information from the texts. They analyze how structure, point of view, visual elements, and figurative language contribute to the meaning or tone of texts. As their analysis skills deepen, students can identify key individual events and details and use them as evidence to support their analysis and to distinguish claims that are supported by an author from those that are not. Additional analysis skills call for students to compare and contrast one author's presentation of events to another interpretation. They learn academic language and domain-specific vocabulary through their reading and use it in their writing and speaking.

In their writing, students in sixth grade develop more sophisticated skills, such as using a cohesive organization of ideas and drawing evidence from a variety of sources to support their purpose or conclusion. They revise, edit, and rewrite their compositions and learn to try new approaches and use technology to improve their writing product. Students conduct research projects that provide them with practice in gathering information, using print and digital sources, and paraphrasing or summarizing information. Integrating reading and writing across the different content areas is emphasized through the addition of the standards for literacy in history/social studies, science, and technical subjects.

Students engage effectively in collaborative conversations with diverse partners and in different groupings on sixth-grade topics and texts, can identify and analyze logical fallacies in speakers' presentations or from media sources. They learn to present an argument and support it with a logical sequence of evidence. They also learn to use expression and nonverbal elements for effect and to engage the audience. To support their writing and speaking, they learn conventions of standard English grammar and usage, capitalization, punctuation, and spelling, such as using commas to set off parenthetical clauses. In sixth grade, the proper use of pronouns is emphasized. Developing academic as well as domain-specific vocabulary is highlighted. Students learn to distinguish between words with similar meanings and to use common affixes and roots as clues to the meaning of words. They also use the relationships between certain words (e.g., cause/effect or part/whole) to help

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English Language Arts in Grade Six

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The Four Strands of the Common Core State Standards English Language Arts, 6-12

- Reading
- Writing
- Speaking and Listening
- Language

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English Language Arts

Overview

Students in sixth grade focus on active engagement with text. They are required to analyze, identify, define, explain, integrate, evaluate, compare, contrast, and cite supportive evidence – developing and building upon those skills that were required in fifth grade. Deeper analysis of literature and informational text continues to be the focus of sixth-grade instruction, although reading fluently and accurately remains a goal for all students. Students' understanding of the precise meaning of words, English language conventions, structural features of informational text and materials, and fundamental elements of literature all support greater comprehension of what they read, see, and hear.

Standards-based instruction is a critical element to develop students' literacy and proficiency in English language arts.

Standards-based instruction is a critical element to develop students' literacy and proficiency in English language arts. The standards describe what students are expected to know and be able to do by the end of the school year. California recently adopted new standards in English language arts: the Common Core State Standards (CCSS), with California additions. The CCSS integrates the strands of English language arts: Reading, Writing, Speaking and Listening, and Language. The new standards will be implemented gradually over the next several years as curriculum frameworks, instructional materials, and assessments based on the CCSS are adopted.

There are many similarities between the CCSS and the 1997 California English language arts standards, but there are also some notable differences. For instance, in the CCSS, the standards in sixth grade are divided into strands: Reading, Writing, Speaking and Listening, and Language. In the 1997 California English language arts standards, the standards are organized around domains: Reading, Writing, Written and Oral English Language Conventions, and Listening and Speaking. An organizational change in the CCSS for grades 6–12 is the inclusion of another set of standards: Reading and Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects. These standards are not intended to replace existing standards in those content areas, but meant to supplement instruction and provide consistency in expectations across the curriculum.

This section provides an overview of the new CCSS for sixth grade English language arts. It includes a

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Balancing Literature and Informational Text in the Reading Strand

- Reading Standards for Literature
- Reading Standards for Informational Text

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Literacy in History/Social Studies, Science, and Technical Subjects

- Students learn to read, write, speak, listen, and use language effectively in a variety of content areas.

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Common Core State Standards with California Additions English Language Arts: Grade Six	
Reading Standards for Literature	
Key Ideas and Details	
1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3.	Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.
Craft and Structure	
4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone. **(See grade 6 Language standards 4-6 for additional expectations.)**
5.	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
6.	Explain how an author develops the point of view of the narrator or speaker in a text.
Integration of Knowledge and Ideas	
7.	Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an

Craft and Structure	
4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone. **(See grade 6 Language standards 4-6 for additional expectations.)**
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6.	Explain how an author develops the point of view of the narrator or speaker in a text.
Integration of Knowledge and Ideas	
7.	Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.
8.	(Not applicable to literature)
9.	Compare and contrast texts in different forms or genres (*e.g.*, stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.
Range of Reading and Level of Text Complexity	
10.	By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
Reading Standards for Informational Text	
Key Ideas and Details	

Reading Standards for Informational Text	
Key Ideas and Details	
1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2.	Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3.	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
Craft and Structure	
4.	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings. **(See grade 6 Language standards 4-6 for additional expectations.)**
5.	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas. **a. Analyze the use of text features (e.g., graphics, headers, captions) in popular media.**

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1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2.	Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3.	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
Craft and Structure	
4.	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings. **(See grade 6 Language standards 4-6 for additional expectations.)**
5.	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas. **a. Analyze the use of text features (e.g., graphics, headers, captions) in popular media.**
6.	Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
Integration of Knowledge and Ideas	
7.	Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
8.	Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
9.	Compare and contrast one author's presentation of events with that of another (e.g., a memoir written

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6.	Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
Integration of Knowledge and Ideas	
7.	Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
8.	Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
9.	Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).
Range of Reading and Level of Text Complexity	
10.	By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
Writing Standards	
Text Types and Purposes	
1.	Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s) and organize the reasons and evidence clearly. b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.

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Text Complexity

RL10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RI10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Learn more about text complexity in Appendixes A and B at http://www.corestandards.org

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Writing

Students in sixth grade demonstrate sophisticated writing skills from their use of specific vocabulary and syntax to a more cohesive organization of ideas that incorporate a range of content and a variety of sources. Their writing demonstrates a command of the conventions of the English language, familiarity with organizational features, and a clear style of writing appropriate for an identified purpose and audience, and experience with the stages of the writing process (e.g., pre-writing, drafting, revising, editing). Students use technology to compose and publish documents and to find resources and gather information to support their main idea.

Both the 1997 California English language arts standards and the CCSS call for students in sixth grade to write multiple-paragraph texts with a central idea or theme, relevant supporting details, the use of precise words and visual imagery, and a conclusion. The purposes of writing that students produce are similar under each set of standards. Students write responses to literature, persuasive compositions, research reports, expository compositions, and narratives using the 1997 California English language arts standards.

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The CCSS for writing arguments and informative/explanatory pieces delineate more detail to the expectations. They also write routinely in both extended and short time frames for a range of discipline-specific tasks, purposes, and audiences. In their arguments, they clearly organize the reasons and relevant evidence, and support claims with credible sources. For informative/explanatory texts, students use an extended array of organizational strategies to aid comprehension: definition, classification, compare/contrast, cause/effect, graphics, and multimedia resources. Under the CCSS, a response to literature writing piece, depending on its purpose, could be considered an example of an informative or an opinion piece. In their narrative writing, students learn how to organize events so the sequence unfolds naturally and use transition words and phrases for sequencing and shifting from one time frame to another. Narrative techniques such as dialogue, description, and

1.	Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s) and organize the reasons and evidence clearly. b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from the argument presented.
2.	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic **or thesis statement**; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from the information or explanation presented.

	f. Provide a concluding statement or section that follows from the information or explanation presented.
3.	Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. e. Provide a conclusion that follows from the narrated experiences or events.
Production and Distribution of Writing	
4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5.	With some guidance and support from peers and adults, develop and strengthen writing as needed by

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Writing
Production and Distribution

Similarities:

- Multi-paragraph compositions
- Directed to a purpose and audience
- Use revision to strengthen

Differences:

- Work collaboratively, with peers and adults, during revisions
- Use technology, including Internet, to produce and publish pieces, to collaborate with others, and to develop keyboard skills

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Research to Build and Present Knowledge	
7.	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
8.	Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
9.	Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply grade 6 Reading standards to literature (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics"). b. Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").
Range of Writing	
10.	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
Speaking and Listening Standards	
Comprehension and Collaboration	
1.	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.

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Speaking and Listening

Similarities:

- Focus on analysis and comprehension of information
- Interpret information presented and identify claims or techniques
- Ask and respond to specific questions for clarification or elaboration
- Presentations organized to support listener's comprehension

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Comprehension and Collaboration	
1.	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed. c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.

	d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
2.	Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
3.	Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons

and evidence from claims that are not.

Presentation of Knowledge and Ideas	
4.	Present claims and findings **(e.g., argument, narrative, informative, response to literature presentations)**, sequencing ideas logically and using pertinent descriptions, facts, and details **and nonverbal elements** to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation. **a. Plan and deliver an informative/explanatory presentation that: develops a topic with relevant facts, definitions, and concrete details; uses appropriate transitions to clarify relationships; uses precise language and domain specific vocabulary; and provides a strong conclusion.**
5.	Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
6.	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 for specific expectations.)
Language Standards	
Conventions of Standard English	
1.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use **all pronouns, including** intensive pronouns (e.g., *myself, ourselves*), **correctly**. c. Recognize and correct inappropriate shifts in pronoun number and person.* d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).*

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Language

CCSS emphasize:

Conventions of Standard English

- Specificity of standards for language conventions

Vocabulary Acquisition and Use

- Focus on understanding words and phrases, acquiring new vocabulary, and developing academic and domain-specific words

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Language Standards	
Conventions of Standard English	
1.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use **all pronouns, including** intensive pronouns (e.g., *myself, ourselves*), **correctly**. c. Recognize and correct inappropriate shifts in pronoun number and person.* d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).* e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.*
2.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

* The following skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking. See "Language Progress Skills Chart, by Grade" in CCSS.

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	b. Spell correctly.*
Knowledge of Language	
3.	Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Vary sentence patterns for meaning, reader/listener interest, and style. b. Maintain consistency in style and tone.
Vocabulary Acquisition and Use	
4.	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience, auditory, audible*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5.	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., personification) in context.

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Language
Vocabulary Acquisition and Use

Differences:

- More depth to vocabulary instruction
- Use a variety of strategies to determine and clarify meaning of unknown words

L4.a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence,) as a clue to the meaning of a word or phrase.

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Language
Vocabulary Acquisition and Use

L6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

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Literacy in History/Social Studies, Science, and Technical Subjects

- Reading Standards for Literacy in History/Social Studies
- Reading Standards for Literacy in Science and Technical Subjects
- Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects

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Literacy Development
2007 Reading/Language Arts Framework

- When seventh and eighth grade are departmentalized, responsibility for improving the reading comprehension of instructional materials should be shared with teachers of all subjects, particularly teachers of history-social science and science. (pp. 175, 192)
- Under 11th & 12th grade word analysis, the standards emphasize using those strategies to attack terms from political science, history-social science, science, and mathematics. However, the issues of teacher responsibility arise in a departmentalized school…shared responsibility is obviously an ideal solution. (p. 232)

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Common Core State Standards with California Additions
Reading Standards for Literacy in History/Social Studies, Science, and Technical Education
Grades Six – Eight

Reading Standards for Literacy in History/Social Studies	
Key Ideas and Details	
1.	Cite specific textual evidence to support analysis of primary and secondary sources.
2.	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
3.	Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).
Craft and Structure	
4.	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
5.	Describe how a text presents information (e.g., sequentially, comparatively, causally).
6.	Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).
Integration of Knowledge and Ideas	
7.	Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

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Reading Standards for Literacy

"Technical Subjects - A course devoted to a practical study, such as engineering, technology, design, business, or other workforce-related subject; a technical aspect of a wider field of study, such as art of music."

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Reading Standards for Literacy

RH4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

RST4. Determine meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

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Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects

WHST1. Write arguments focused on *discipline-specific content*.

WHST10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

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Extra Support for Struggling Readers

- Students who are not achieving success in reading skills may benefit from extra support.
- Ideas for providing support are listed on page 6.7 and 6.8.
- Refer to the 2007 *Reading/Language Arts Framework for California Public Schools* for more information.

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Support for English Learners

- Language standards support focus of English language development
- Focus on language conventions in both writing and speaking
- Continued use of the California English-language development standards as a pathway to CCSS
- Use chart on page 6.9 for planning effective ELD instruction

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Transition to Common Core State Standards with California Additions Planning ELD Instruction: Grade Six

Reading Standards for Literature	2. Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments. 4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone. **(See grade 6 Language standards 4-6 for additional expectations.)** 5. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot. 7. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch. 9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes

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	discipline-specific tasks, purposes, and audiences.
Speaking and Listening Standards	1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed. c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion. d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing. 2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study. 3. Delineate a speaker's argument and specific claims, distinguishing claims that are

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	displays in presentations to clarify information.
Language Standards	1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use **all pronouns, including** intensive pronouns (e.g., *myself, ourselves*), **correctly**. c. Recognize and correct inappropriate shifts in pronoun number and person. d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language. 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Vary sentence patterns for meaning, reader/listener interest, and style. b. Maintain consistency in style and tone.

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Support for English Learners

New resource for effective instruction:

- The California Department of Education's publication, *Improving Education for English Learners: Research-Based Approaches*

For more information go to:
http://www.cde.ca.gov/re/pn/rc/


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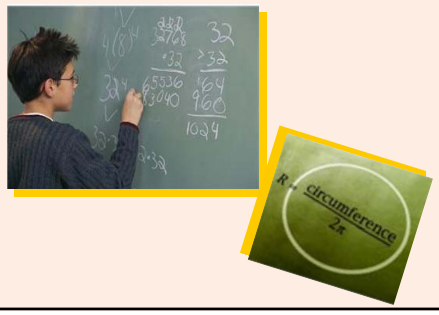
Sixth Grade Mathematics

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What Sixth Grade Students Should Know

Students who have met the fifth grade Common Core State Standards can:

- Add, subtract, multiply and divide multi-digit positive whole numbers
- Add and subtract fractions (with unlike denominators) and multiply and divide simple fractions
- Add, subtract, multiply, and divide decimals
- Write and interpret simple numerical expressions
- Graph ordered pairs in the first quadrant of coordinate plane
- Distinguish among shapes and their attributes and use formulas to calculate area of various shapes
- Solve problems involving measurement and understand the concept of volume

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Mathematics

Overview

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become adept at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundations built in the early grades.

California recently adopted new standards in mathematics, the Common Core State Standards (CCSS), with California additions. The CCSS comprise standards developed by the state-led Common Core State Standards Initiative and material taken from the 1997 California mathematics standards. The new standards will be implemented gradually over the next several years as curriculum frameworks, instructional materials, and assessments based on the CCSS are adopted.

There are many similarities between the CCSS and the 1997 California mathematics standards, but there are also a few noteworthy differences. For instance, the CCSS are organized by "domains" which add grade-level focus and vary slightly by grade. The domains for sixth grade are Ratios and Proportional Relationships (RP), The Number System (NS), Expressions and Equations (EE), Geometry (G), and Statistics and Probability (SP). Also, the CCSS do not include "key standards" as in the 1997 California mathematics standards. Instead, the CCSS are designed to have a greater focus at each grade and to develop mathematics topics in depth. In the early grades, the CCSS continue to emphasize concepts necessary for the study of more advanced mathematics in later years. To ensure that students have adequate time to achieve mastery, some of the 1997 California mathematics standards familiar to California's sixth grade teachers will be taught in different grades after the CCSS are fully implemented.

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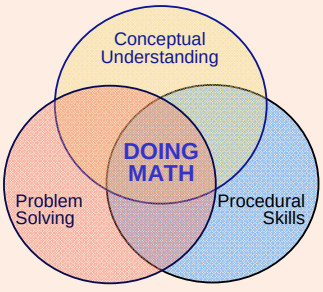
Mathematical Proficiency

as defined by the California Framework (2006)



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Common Core Standards for Mathematics

Two Types of Standards

- **Mathematical Practice** (recurring throughout the grades)
- **Mathematical Content** (different at each grade level)

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Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

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Standards for Mathematical Content

Organized by:

- Grade level, in grades K-8, and
- Domains (that vary slightly at each grade)

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CCSS Domains K-5

Domain	K	1	2	3	4	5
Counting and Cardinality (CC)	X					
Operations and Algebraic Thinking (OA)	X	X	X	X	X	X
Number and Operations in Base Ten (NBT)	X	X	X	X	X	X
Measurement and Data (MD)	X	X	X	X	X	X
Geometry (G)	X	X	X	X	X	X
Number and Operations – Fractions (NF)				X	X	X

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CCSS Domains 6-8

Domain	6	7	8	8 Algebra
Ratios and Proportional Relationships (RP)	X	X		
The Number System (NS)	X	X	X	
Expressions and Equations (EE)	X	X	X	
Geometry (G)	X	X	X	X
Statistics and Probability (SP)	X	X	X	X
Functions (F)			X	X
Number and Quantity				X
Algebra				X
Seeing Structure in Expressions				X
Constructing Viable Arguments				X

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Mathematics Grade 8

"The California State Board of Education acknowledges that the goal for 8th grade students is Algebra I. However, they also recognize that not all 8th grade students have the necessary prerequisite skills for Algebra I. Consequently, the State Board of Education adopted two sets of standards for 8th grade. The first set describes standards for Algebra I."

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Source: *K-12 California's Common Core Content Standards for Mathematics*, p. 33

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Mathematics Grade 8 (cont.)

"The second set of standards is from the 8th grade Common Core document published June 2, 2010. These standards are for 8th grade students who do not have the necessary prerequisite skills for Algebra I. The goal of the 8th grade Common Core is to finalize the mathematics preparation for students in high school. There is some duplication of standards between grades and courses that will be resolved in the frameworks/instructional materials development process."

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Source: *K-12 California's Common Core Content Standards for Mathematics*, p. 33

Grade 6 Overview

Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems.

The Number System

- Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables.

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

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Standards for Mathematical Content

How the grade level standards are organized

Domain

Standard

Cluster

Grade 6

Ratios and Proportional Relationships 6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*
2. Understand the concept of a unit rate *a/b* associated with a ratio *a:b* with *b* ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
   a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
   b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, If it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*
   c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
   d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

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Grade Level Document Standards Table

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Domain

Standard

Cluster

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Common Core State Standards with California Additions
Mathematics – Grade Six

Ratios and Proportional Relationships (6.RP)

Understand ratio concepts and use ratio reasoning to solve problems.

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
   a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
   b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*
   c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
   d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

Highlights: Grade Six Common Core

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Ratios and Proportional Relationships
- Solve ratio and rate problems

The Number System
- Divide fractions by fractions
- Introduce negative numbers
- Add and subtract with rational numbers
- Graph points in all four quadrants of the coordinate plane

Expressions and Equations
- Read, write and evaluate expressions with variables
- Write and solve simple equations
- Work with dependent and independent variables

Geometry
- Determine area and volume of complex shapes

Statistics and Probability
- Understand statistical variability and summarize data sets

Highlights: Grade Six Common Core

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Ratios and Proportional Relationships
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Understand ratio concepts and use ratio reasoning to solve problems.	
1.	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*
2.	Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*[1]
3.	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?* c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
The Number System (6.NS)	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	

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The Number System (6.NS)	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
1.	Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9*

[1] Expectations for unit rates in this grade are limited to non-complex fractions.

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	because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?
Compute fluently with multi-digit numbers and find common factors and multiples.	
2.	Fluently divide multi-digit numbers using the standard algorithm.
3.	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
4.	Find the greatest common factor of two whole numbers less than or equal to 100 and the least

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	whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).
Apply and extend previous understandings of numbers to the system of rational numbers.	
5.	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
6.	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite. b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
7.	Understand ordering and absolute value of rational numbers. a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.* b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –5°C > –7°C to express the fact that –5°C is warmer than –7°C.*

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7.	Understand ordering and absolute value of rational numbers. a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.* b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3°C > –7°C to express the fact that –3°C is warmer than –7°C.* c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.* d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*
7.1	**Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. (Common Core Standard 7NS-1)** **a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. (Common Core Standard 7NS-1a)** **b. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. (Common Core Standard 7NS-1b)** **c. Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. (Common Core Standard 7NS-1c)**

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Grade Six California Additions

Purpose

To maintain the rigor in the 1997 CA standards, including readiness for algebra at grade eight.

Examples of California Additions

- Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers… (6.NS.7.1 a-d)
- Draw geometric shapes with given conditions… (6.G.5)
- Know the formulas for area and circumference of a circle… (6.G. 6)

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Connections: Mathematical Content and Mathematical Practice

Examples of Connections:

- **Understand** the concept of a ratio and use ratio language to **describe** a ratio relationship between two quantities… (6.RP.1)
- Write, interpret, and **explain** statements of order for rational numbers in real-world contexts... (6.NS.7b)
- **Understand** the absolute value of a rational number as its distance from 0 on the number line... (6.NS.7c)

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Transition to Common Core: Grade Shifts

Content	1997 CA Standards	CCSS
Graph points in all four quadrants of the coordinate plan	Grade 5	Grade 6
Add and subtract negative integers	Grade 5	Grade 6
Divide fractions by fractions	Grade 5	Grade 6
Percent problems	Grade 5	Grade 6
Absolute value of a negative number	Grade 7	Grade 6
Multiply and divide negative integers	Grade 6	Grade 7

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Highlights: Grade Six Common Core

Ratios and Proportional Relationships
- Solve ratio and rate problems

The Number System
- Divide fractions by fractions
- Introduce negative numbers
- Add and subtract with rational numbers
- Graph points in all four quadrants of the coordinate plane

Expressions and Equations
- Read, write and evaluate expressions with variables
- Write and solve simple equations
- Work with dependent and independent variables

Geometry
- Determine area and volume of complex shapes

Statistics and Probability
- Understand statistical variability and summarize data sets

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Expressions and Equations (6.EE)	
Apply and extend previous understandings of arithmetic to algebraic expressions.	
1.	Write and evaluate numerical expressions involving whole-number exponents.
2.	Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.* b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.* c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.*
3.	Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.*
4.	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*

Reason about and solve one-variable equations and inequalities.	
5.	Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6.	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
7.	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.
8.	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.
Represent and analyze quantitative relationships between dependent and independent variables.	
9.	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.*
Geometry (6.G)	
Solve real-world and mathematical problems involving area, surface area, and volume.	
1.	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing

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Geometry (6.G)	
Solve real-world and mathematical problems involving area, surface area, and volume.	
1.	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
2.	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l w h$ and $V = b h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
3.	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
4.	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
5.	**Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. (Common Core Standard 7G-2)**
6.	**Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. (Common Core Standard 7G-4)**
Statistics and Probability (6.SP)	

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Statistics and Probability (6.SP)	
Develop understanding of statistical variability.	
1.	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*
2.	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
3.	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
Summarize and describe distributions.	
4.	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
5.	Summarize numerical data sets in relation to their context, such as by: a. Reporting the number of observations. b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

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Transition to Common Core: Grade Shifts

Content	1997 CA Standards	CCSS
Solving inequalities	Grade 7	Grade 6
Use of theoretical and experimental probability	Grade 6	Grade 7
Use the four operations with negative integers	Grade 6	Grade 7
Volume of cylinders	Grade 6	Grade 8
Concepts of mean and median to summarize data sets	Grade 5	Grade 6
Radius and diameter of a circle	Grade 4	Grade 6

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Support for English Learners

Students need to develop knowledge of the features of language used to teach mathematics:

- Semantics, Syntax, Mathematical Discourse

Some special challenges:

- English words such as first, second, last, sum, difference and value
- Multiple-meaning words
- Place values
- Narrative descriptions of a word problem

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The Education and the Environment Initiative

The following sixth-grade curriculum units from the Education and the Environment Initiative (EEI) can be used to provide instruction in the history–social science standards listed below.

Grade Six		
#	Standard Text	EEI Unit Name
6.1.1.	Describe the hunter-gatherer societies, including the development of tools and the use of fire.	*Paleolithic People: Tools, Tasks, and Fire*
6.1.2.	Identify the locations of human communities that populated the major regions of the world and describe how humans adapted to a variety of environments.	*Paleolithic People: Adapting to Change*
6.2.1.	Locate and describe the major river systems and discuss the physical settings that supported permanent settlement and early civilizations.	*River Systems and Ancient Peoples*
6.2.2.	Trace the development of agricultural techniques that permitted the production of economic surplus and the emergence of cities as centers of culture and power.	*Agricultural Advances in Ancient Civilizations*
6.2.6.	Describe the role of Egyptian trade in the eastern Mediterranean and Nile valley.	*Egypt and Kush: A Tale of Two Civilizations*
6.2.8.	Identify the location of the Kush civilization and describe its political, commercial, and cultural relations with Egypt.	*Egypt and Kush: A Tale of Two Civilizations*

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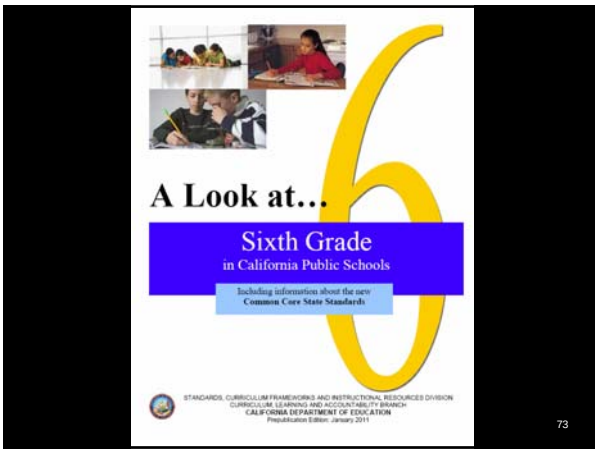

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